UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,408	08/30/2001	Akito Kohno	393032027800	3181

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EXAMINER
FAULK, DEVONA E

ART UNIT	PAPER NUMBER
2615	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/945,408	KOHNO ET AL.
	Examiner	Art Unit	
	DEVONA E. FAULK	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>18 April 2008</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>3-5,7,8,10,11,13,14 and 16</u> is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) <u>5,8,11 and 14</u> is/are allowed.
6)☒ Claim(s) <u>3,4,7,10 and 13</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>30 August 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Claims 5,8,11 and 14 were indicated as allowable in the previous office action

and remain in allowable form.

2.   Claim 16 was objected to due to being dependent upon a rejected claim but was

indicated as allowable if rewritten in independent form.

3.   The applicant has added the allowable subject matter of claim 16 to claims 3,10

and 13. The remaining claims are in allowable form. However, after further

consideration, the examiner has determined that the subject matter in claim 16 is not

allowable.

4.   Claims 1-2,6,9,12,15-16 are cancelled.

5.   The examiner contacted the applicant's representative to see if the applicant

would be willing to cancel claims 3,10 and 13 and was told that the applicant did not

want to cancel.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   **Claims 3,4,7,10 and 13** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Yamamoto (US 5,942,708) in view of Roland VS-1680 Owner's

Manual , hereafter Roland, in further view of Iizuka (US 4,898,059).

Regarding **claim 3,,** Yamamoto discloses a mixing apparatus (method is obvious in functionality of apparatus, Figure 1) comprising

an input device that inputs a plurality of first audio data (MIDI 11, provides a plurality of MIDI signals, Figure 1; column 4, lines 35-37) ;

a bus device that mixes audio data (tone generator mixes data stored in the waveform memory, column 6, lines 18-41);

an output device that outputs audio data mixed by said bus device (sound system 8; Figure 1; column 4, lines 26-34)

a first storage device that stores a plurality of second audio data (waveform memory 5, Figure 1);

a plurality of operating members each being disposed to be depressed and having a sensor for detecting the depression (pads 12 and panel indicator 2 Figure 1 ; column 4, lines 37-42);

a second assigning device that assigns at least one of the plurality of second audio data stored in said storage device to at least one of said plurality of operating members (assignment table assigns the data in waveform memory; column 5, lines 33-43);

a second storage device (RAM 16; column 6, lines 18-23);

a first control device that causes said second storage device to temporarily store the assigned second audio data (CPU 14; column 6, lines 17-23);

a reproducing device that reads out and reproduces the second audio data from said second storage device when the at least one of said plurality of operating members

to which the second audio data is assigned is detected by the sensor as being

depressed (RAM 16; column 7, lines 20-60); and

a second control device that causes said second storage device to store timing

data specifying timing of reading out the second audio data when said reproducing

device reproduces the second audio data (CPU 14 functions as the first and second

control device; column 6, lines 17-23).

Regarding wherein the first audio data includes one of an audio signal supplied

from an A/D converter and audio signal supplied from an expansion card. Providing

audio supplied from an A/D converter is well known in the art.   Yamamoto teaches of

providing audio data from an A/D converter (Figure 1, A/D converter 4). It would have

been obvious to modify Yamamoto so that the first audio data includes data supplied

from an A/D converter so that audio data from other sources can be mixed.

Yamamoto discloses an input device that input a plurality of first audio data (MIDI

provides a plurality of MIDI signals), a bus device that mixes audio data(tone generator

mixes data in waveform memory) and an assigning device that can function in two

modes. Yamamoto fails to disclose an assigning device that assigns a respective one

of a supplied plurality of first audio data to each one of said plurality of input channels, a

bus device that mixes the plurality of first audio data assigned to the plurality of input

channels.

Roland discloses a mixer that has a mixer bus that mixes signals from a plurality

of signals assigned to the mix bus (pages 25-26). The prior art has recognized the

benefits of assigning data to a plurality of input channels and using a mixing bus that mixes data that has been assigned to the said plurality of input channels. It would have been obvious to try the known methods of using a mixing bus, that mixes data assigned to a plurality of input channels, with a music apparatus with a reasonable expectation of success.

Yamamoto as modified discloses a storage device that stores timing data specifying timing of reading out the second audio data when said reproducing device reproduces the second audio data (CPU 14; column 6, lines 23-25).

Yamamoto as modified fails to disclose explicitly that the second storage device stores information indicating timing of depressing the at least one of said plurality of operating members.

Iizuka discloses storing information indicating timing of depressing of an operating member (column 6, lines 5-11). It would have been obvious to modify Yamamoto as modified so that the second storage device stores information indicating timing of depressing of one of the operating members in order to store when an event occurs.

Claim 4 is dependent upon claim 3. Regarding claim 4, Yamamoto as modified fails to disclose that the second audio data caused to be stored by said first control device and the information cause to be stored by the second control device are stored in separate areas in said second storage device. The examiner asserts that were data is stored is a matter of design choice. It would have been obvious to have the data stored in different areas in a storage device in order to preserve both sets of data.

Claim 7 is dependent upon claim 3. Regarding claim 3, Yamamoto as modified

discloses wherein said operating members are pads(Yamamoto teaches of pads 12;

see Yamamoto as applied to claim 3 above). .

Regarding claim 10, Yamamoto discloses a method of controlling a mixing

apparatus, comprising:

a first assigning step of assigning (assignment table; column 5, lines 33-43);

a mixing step of mixing the plurality of data (tone generator mixes data stored in

the waveform memory, column 6, lines 18-41);

an output step of outputting the audio data mixed in said mixing step (sound

system 8 outputs mixed data; Figure 1; column 4, lines 26-34);

a storing step of storing a plurality of second audio data in a first storage device

(waveform memory 5, Figure 1);;

a second assigning step of assigning at least one of the plurality of second audio

data stored in the first storage device, respectively, to at least one of a plurality of

operating members each disposed to be depressed and having a sensor for detecting

the depression assignment table assigns the data in waveform memory; column 5, lines

33-43);

a first controlling step of causing a second storage device to temporarily store the

assigned second audio data CPU 14; column 6, lines 23-25);

a reproducing step of reading out and reproducing the second audio data from

the second storage device when the at least one of the plurality of operating members

to which the second audio data is assigned is detected by the sensor as being

depressed (RAM 16; column 7, lines 20-60; and

a second controlling step of causing the second control device to store timing

data specifying timing of reading out the second audio data when said reproducing

device reproduces the second audio data (CPU 14; column 6, lines 17-23).

Regarding wherein the first audio data includes one of an audio signal supplied

from an A/D converter and audio signal supplied from an expansion card. Providing

audio supplied from an A/D converter is well known in the art. Yamamoto teaches of

providing audio data from an A/D converter (Figure 1, A/D converter 4). It would have

been obvious to modify Yamamoto so that the first audio data includes data supplied

from an A/D converter so that audio data from other sources can be mixed.

Yamamoto discloses an input device that input a plurality of first audio data (MIDI

provides a plurality of MIDI signals), a bus device that mixes audio data(tone generator

mixes data in waveform memory) and an assigning device that can function in two

modes. Yamamoto fails to disclose assigning a respective one of a supplied plurality of

first audio data to each one of said plurality of input channels, a bus device that mixes

the plurality of first audio data assigned to the plurality of input channels.

Roland discloses a mixer that has a mixer bus that mixes signals from a plurality

of signals assigned to the mix bus (pages 25-26). The prior art has recognized the

benefits of assigning data to a plurality of input channels and using a mixing bus that

mixes data that has been assigned to the said plurality of input channels. It would have

been obvious to try the known methods of using a mixing bus, that mixes data assigned

to a plurality of input channels, with a music apparatus with a reasonable expectation of success.

Yamamoto as modified discloses a storage device that stores timing data specifying timing of reading out the second audio data when said reproducing device reproduces the second audio data (CPU 14; column 6, lines 23-25).

Yamamoto as modified fails to disclose explicitly that the second controlling step causes the second storage device to store information indicating timing of depressing the at least one of said plurality of operating members.

Iizuka discloses storing information indicating timing of depressing of an operating member (column 6, lines 5-11). It would have been obvious to modify Yamamoto as modified so that the second storage device stores information indicating timing of depressing of one of the operating members in order to store when an event occurs.

Regarding claim 13, Yamamoto discloses a computer-readable medium encoded with a computer program for causing a computer to execute the method of controlling a mixing apparatus (column 15, lines 53-63), comprising:

a first assigning step of assigning (assignment table has two modes; column 5, lines 33-43);

a mixing step of mixing the plurality of data (tone generator mixes data stored in the waveform memory, column 6, lines 18-41);

an output step of outputting the audio data mixed in said mixing step (sound system 8 outputs mixed data; Figure 1; column 4, lines 26-34);

a storing step of storing a plurality of second audio data in a first storage device (waveform memory 5, Figure 1);;

a second assigning step of assigning at least one of the plurality of second audio data stored in the first storage device, respectively, to at least one of a plurality of operating members each disposed to be depressed and having a sensor for detecting the depression assignment table assigns the data in waveform memory; column 5, lines 33-43);

a first controlling step of causing a second storage device to temporarily store the assigned second audio data CPU 14; column 6, lines 23-25);

a reproducing step of reading out and reproducing the second audio data from the second storage device when the at least one of the plurality of operating members to which the second audio data is assigned is detected by the sensor as being depressed (RAM 16; column 7, lines 20-60; and

a second controlling step of causing the second control device to store timing data specifying timing of reading out the second audio data when said reproducing device reproduces the second audio data (CPU 14; column 6, lines 23-25).

Regarding wherein the first audio data includes one of an audio signal supplied from an A/D converter and audio signal supplied from an expansion card. Providing audio supplied from an A/D converter is well known in the art.   Yamamoto teaches of providing audio data from an A/D converter (Figure 1, A/D converter 4). It would have been obvious to modify Yamamoto so that the first audio data includes data supplied from an A/D converter so that audio data from other sources can be mixed.

Yamamoto discloses an input device that input a plurality of first audio data (MIDI

provides a plurality of MIDI signals), a bus device that mixes audio data(tone generator

mixes data in waveform memory) and an assigning device that can function in two

modes. Yamamoto fails to disclose assigning a respective one of a supplied plurality of

first audio data to each one of said plurality of input channels, a bus device that mixes

the plurality of first audio data assigned to the plurality of input channels.

Roland discloses a mixer that has a mixer bus that mixes signals from a plurality

of signals assigned to the mix bus (pages 25-26). The prior art has recognized the

benefits of assigning data to a plurality of input channels and using a mixing bus that

mixes data that has been assigned to the said plurality of input channels. It would have

been obvious to try the known methods of using a mixing bus, that mixes data assigned

to a plurality of input channels, with a music apparatus with a reasonable expectation of

success.

Yamamoto as modified discloses a storage device that stores timing data

specifying timing of reading out the second audio data when said reproducing device

reproduces the second audio data (CPU 14; column 6, lines 23-25).

Yamamoto as modified fails to disclose explicitly that the second controlling step

causes the second storage device to store information indicating timing of depressing

the at least one of said plurality of operating members.

Iizuka discloses storing information indicating timing of depressing of an

operating member (column 6, lines 5-11). It would have been obvious to modify

Yamamoto as modified so that the second storage device stores information indicating

timing of depressing of one of the operating members in order to store when an event

occurs.

Allowable Subject Matter

7.   Claims 5,8,11,14 are allowed.

        Regarding claims 5,11 and14 prior art Powers, US 6, 839,441, discloses a sound

mixing console with master control section including an input device that inputs a

plurality of first audio data, an assigning device, a storage device. Prior art Tanji (JP 10-

320-194) discloses an effect giving device and recording medium. Prior art Yamamoto,

US 5,942,708, discloses a tone generator with diversification of waveform using variable

addressing including an input device, a hard disk drive, a plurality of operating members

an assigning device, a memory, a control device. Prior art Saito,US 6,198,035,

discloses a musical sound signal generation apparatus. Prior art East, US 6,061,458,

discloses an audio mixing console. Prior art Ito, US 5,300,723, discloses an electronic

music device including a switch panel and a switch detection circuit. Prior art Suzuki et

al., US 5,831,193, discloses a method and device for forming a tone waveform by

combined use of different waveform sample forming resolutions including a hard disk

drive, a RAM having a working memory.   Prior art Haruyama, US 5,902,948, discloses

a performance-instructing device including a RAM memory that temporarily stores

automatic performance data, and a switch panel and a switch-detecting panel. Prior art

Kondo et al., US 5,668,337 discloses an automatic performance device including a

display including a channel change table used to assign data to certain channel, a

switch operation detection circuit.   Prior art Yamamoto et al, US 6,573,444, discloses a

music data compression apparatus and method including a hard disk drive having a

primary memory that temporarily stores musical pieces recorded on a music CD and

when a user presses a digital dubbing key the data stored in the primary memory,

compressed and the compressed data is stored in a secondary memory.

　　　Regarding claim 5, the prior art or combination thereof fails to discloses or make

obvious   "an assigning device that assigns at least one of the plurality of second audio

data stored in said built-in hard disk device and at lest one of the plurality of third audio

data stored in said external storage device respectively to at least one of said plurality of

operating members" and "said control device that is responsive to said assigning device

assigning the third audio data, respectively, to the at least one of said plurality of

operating members, for causing said built-in hard disk device to temporarily store the

assigned second audio data and causing said memory to store the assigned third audio

data, said control device being further responsive to said assigning devices assigning

the second audio data, respectively, to the at least one of said plurality of operating

members, for reading out the assigned second audio data from said built-in hard disk

device and causing said memory to temporarily store the assigned second audio data

without double storing the assigned second audio data in said built-in hard disk".

　　　Regarding claim 11, the prior art or combination thereof fails to discloses or make

obvious   and a controlling step of causing, in response to assigning the third audio

data, respectively, to the at least one of said plurality of operating members in said

assigning step, the built-in hard disk device to temporarily store the assigned second audio data and causing said memory to store the assigned third audio data, and reading out, in response to assigning the second audio data, respectively, to the at least one of said plurality of operating members in said assigning step, the assigned second audio data from the built-in hard disk device and causing the memory to temporarily store the assigned second audio data without double storing the assigned second audio data in the built-in hard disk. Therefore the prior art or combination thereof fails to disclose or make obvious a mixing device and method as claimed.

Regarding claim 14, the prior art or combination thereof fails to discloses or make obvious and "using a controlling module to cause, in response to assigning the third audio data, respectively, to the at least one of said plurality of operating members in said assigning module, the built-in hard disk to temporarily store the assigned second audio data and causing said memory to store the assigned third audio data, and reading out, in response to assigning the second audio data, respectively, to the at least one of said plurality of operating members in said assigning module, the assigned second audio data from the built-in hard disk device and causing the memory to temporarily store the assigned second audio data without double storing the assigned second audio data in the built-in hard disk. . Therefore the prior art or combination thereof fails to disclose or make obvious a mixing device and method as claimed.

Claim 8 is allowed due to dependency on claim 5.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devona E. Faulk/

Examiner
Art Unit 2615
7/31/2008

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2615